

REMARKS

Overview

Claims 12, 14, 15, 17, 20 and 21 remain in the application. Independent claim 12 has been amended. Claims 1-11 and 25-40 have been cancelled as being drawn to a nonelected invention. New claim 41 has been presented.

Applicants believe that the amendments presented herein are fully supported by the specification and drawings as originally filed. No new matter is believed or intended to be involved. It is respectfully submitted that all of the claims remaining in the application are allowable over the cited references as none of the cited references alone or in combination, teach or suggest all of the limitations of the claims.

All claims remaining in the application are believed to be in condition for allowance. Reconsideration and reexamination of the application is respectfully requested in view of the following remarks.

Preliminary Matter

Applicants note that Haberl et al., U.S. Patent 5,862,553 (“Haberl”) is not listed on the PTO-892 form. Applicants respectfully request that the Haberl reference be listed on a PTO-892 form to facilitate listing of the reference on the face of the patent, when published.

Amendments to the Specification

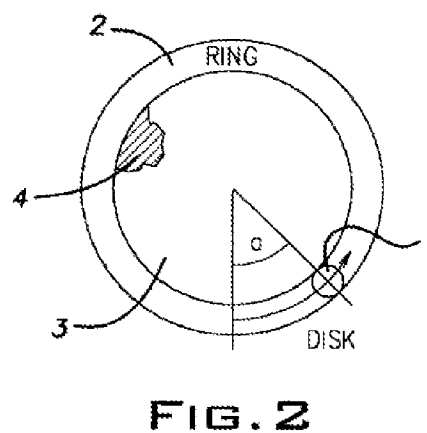
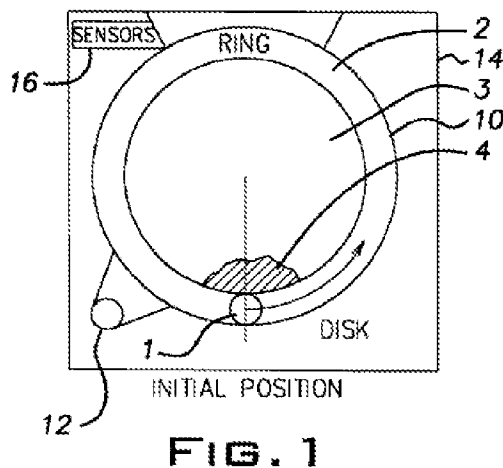
The specification has been amended to include new paragraph [0029.1], support for which can be found U.S. Patent 5,219,370, incorporated by reference in the instant application. Support for the new paragraph can be found at least in column 5, lines 48-52 and column 7, lines 60-66.

Additionally, a section entitled “Cross-Reference to Related Application” has been added, and a petition for unintentionally delayed claim to priority has been submitted concurrently with this amendment.

Issues Under 35 U.S.C. § 102(b)

Claims 12 and 14 stand rejected under 35 U.S.C. §102(b) as being anticipated by Haberl et al., U.S. Patent No. 5,862,553, (“Haberl”). This rejection is respectfully traversed.

As shown in Figure 1 below, Haberl discloses a perforated drum 3 mounted for rotation about a horizontal axis in a tub 10. A motor 12 rotates the drum 3 at various speeds. Acceleration and frequency sensors 16 detect an unbalance condition of the washload and determine drum rotation frequency. Mounted on the drum are annular hollow bodies 2 having a preferably rectangular cross-section. One or more balancing masses 1 or disks are movably located in each hollow body 2.



The balancing masses 1 are at least partially submerged in a fluid such as oil. The fluid is caused to flow due to its friction against the inner wall of the ring 2 as the ring rotates with the drum 3. In this way, the balancing masses 1 are pushed to a height which is above the minimum height location. This raised location is represented by the angle “a” in Figure 2.

The purpose of the balancing mass 1 is to offset an unbalanced washload 4 that is adhered to the surface of the drum 3 via centrifugal force during the spinning cycle of a washing machine. Haberl discloses that the balancing mass tends to spontaneously position itself in direct opposition to the position of the unbalanced washload 4 so as to dynamically balance the system.

Haberl further discloses that the angle “a” to which the balancing mass rises is dependent upon the viscosity of the fluid. In some situations, the balancing mass 1 will stall at a position

just shy of 90°. Haberl indicates that a small increase in speed of the drum 3 will provide the thrust necessary to carry the balancing mass 1 beyond 90° such that it will begin dynamically balance the unbalanced washload 4. Haberl discloses that the small increase in speed can occur in one of two ways: 1) through the natural manner in which gravity acts upon the washload, slowing slightly as it is lifted to 180°, and then accelerating slightly as the load proceeds back to the 360° location; or 2) through manipulating the signals from the speed control to provide the speed increase necessary.

The second option involves imposing a variable speed to the drum during the spinning cycle. A equation for driving this variable speed motion of the washtub 3 is given as:

$$\omega_b = \omega_{b0} * (1 + a * \cos \varphi_b)$$

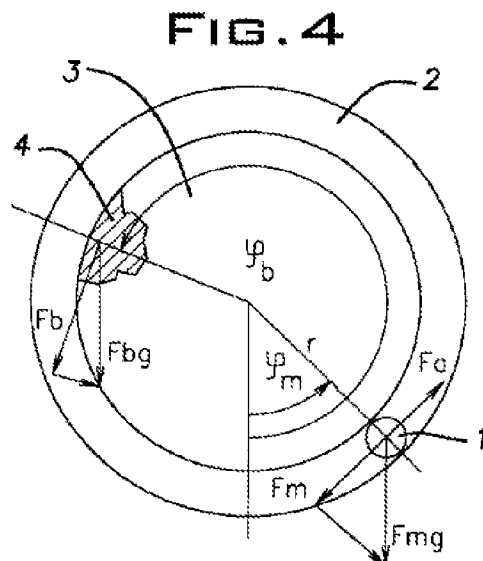
where:

ω_b is the instantaneous angular velocity of the drum (rad/s);

ω_{b0} is the average drum rotation speed (rad/s);

“a” is a constant factor; and

φ_b is the angular position of the spinning unbalanced load 4 (see Fig. 4 below).



At any rate, the teachings of Haberl are limited to the spin extraction phase of the washing machine operation. Haberl explicitly states that the improvement is limited to this phase of operation. See column 3, lines 25-33 which states (emphasis added):

“However, the obtainable improvement is limited to the dynamic self-balancing action during the spin-extraction phase only, ie. when the drum rotates at a frequency which is considerably higher than the natural resonance frequency of the suspended washing assembly filled with its normal washload, and not during the phases in which the drum rotation frequency is considerably lower, ie. at the normal washing or even slightly higher frequencies.”

Therefore, Haberl does not disclose, teach or suggest oscillating the wash chamber about the central axis through a clockwise angle of rotation and a counter-clockwise angle of rotation with speed varying oscillations, the speed varying oscillations being maintained to effect less than a one gravity centrifugal force on the items such that the items will tumble in said wash chamber as specifically recited in claim 12. For at least this reason, claim 12 and all claims depending therefrom should be deemed allowable over Haberl. Applicants respectfully request that the §102(b) rejection of claims 12 and 14 over Haberl be withdrawn.

Issues Under 35 U.S.C. § 102(e)

Claims 12, 14, 15, 17, 20 and 21 stand rejected under 35 U.S.C. §102(e) as being anticipated by McAllister et al., U.S. Patent No. 7,127,767, (“McAllister ‘767”). This rejection is respectfully traversed.

The McAllister reference was filed as U.S. Patent Application Serial No. 10/142,345 on May 9, 2002. U.S. Patent 7,127,767 issued on October 31, 2006, such that co-pendency existed as of the January 27, 2004 filing date of the instant application. Applicants have made an unintentionally delayed claim for domestic priority to the ‘767 patent, and submitted a petition to the Commissioner for Patents for acceptance thereof.

Applicants respectfully submit that if the petitioned claim for domestic priority is accepted by the Commissioner, the McAllister reference will become unavailable as prior art such that the anticipation rejection over McAllister is moot.

Applicants respectfully suggest that the Examiner initiate a suspension of action under 37 C.F.R. §1.103(e) to await a ruling from the Commissioner before issuing any further office actions in the present application. If there is an objection to suspending action under 37 C.F.R. §1.103(e), the Examiner is invited to contact the undersigned to suggest submission of a petition under 37 C.F.R. §1.103(a) for suspension of action.

Issues Under 35 U.S.C. § 103(a)

Claims 15 and 17 stand rejected under 35 U.S.C. §103(a) as being obvious over applicants' admitted prior art ("AAPA") in view of Haberl et al., U.S. Patent No. 5,862,553, ("Haberl"). This rejection is respectfully traversed.

To establish a *prima facie* case of obviousness, several basic criteria must be met. Under *Graham v. John Deere*, 383 U.S. 1 (1966), it is necessary to: 1) determine the scope and content of the prior art; 2) ascertain the differences between the prior art and the claims at issue; 3) resolve the level of ordinary skill in the pertinent art; and 4) evaluate evidence of secondary consideration. Additionally, the obviousness evaluation will be informed by a showing of teaching, suggestion, or motivation that would lead a person of ordinary skill in the art to combine the prior art to meet the claimed subject matter, although a rigid application of this showing is not required. The obviousness analysis must be explicit, and it is necessary to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the prior art elements in the manner claimed. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. ____; 127 S. Ct 1727; 82 U.S.P.Q.2d (BNA) 1385 (2007).

The Examiner has failed to ascertain the differences between the prior art and the claims at issue. AAPA discloses tumbling a clothes load by rotating the wash chamber at a speed less than that which causes the clothing to be held against the wall of the wash chamber with centrifugal force. AAPA also discloses rotating the wash chamber with symmetric and constant clockwise and counter clockwise oscillations. Haberl discloses varying the rotational speed of a wash chamber that is rotating at a speed greater than that which causes the clothing to be held against the wall of the wash chamber with centrifugal force. Therefore, neither AAPA nor Haberl discloses oscillating the wash chamber about the central axis through a clockwise angle

of rotation and a counter-clockwise angle of rotation with speed varying oscillations, the speed varying oscillations being maintained to effect less than a one gravity centrifugal force on the items such that the items will tumble in said wash chamber as recited in claim 15.

The Examiner has alleged that it would be obvious to apply the varying speed spin during the spin cycle of Haberl into the clothes tumbling wash process as claimed. However, the Examiner has failed to identify a reason, in the explicit manner required by law, for making this alleged combination. Applicants submit that Haberl applies a varying rotational speed to a spinning wash chamber with clothes that do not move relative to the wash chamber for the purpose of initiating co-rotation of a counterbalancing weight with the wash chamber rotation. In fact, Haberl teaches away from what Applicants have done by stating that the obtainable improvement is limited to the spin extraction phase. The Examiner has failed to identify any reason within AAPA, Haberl or the knowledge of one of ordinary skill in the art which would render it obvious to apply a speed varying wash chamber oscillation during the clothes tumbling portion of the wash cycle to achieve increased mechanical washability results as done by Applicants. Applicants respectfully submit that a different problem has been solved with a claimed method that is not contemplated by the cited prior art.

Applicants respectfully submit that the requirements for establishing a case of *prima facie* obviousness have not been satisfied, and that claims 15 and 17 should be deemed allowable over the cited prior art.

Claims 20 and 21 stand rejected under 35 U.S.C. §103(a) as being obvious over Cooresmans et al., U.S. Patent Application No. 2003/0035757, (“Cooresmans”) in view of Haberl et al., U.S. Patent No. 5,862,553, (“Haberl”). This rejection is respectfully traversed.

As discussed with respect to claim 12, Haberl fails to teach or suggest oscillating the wash chamber about the central axis through a clockwise angle of rotation and a counter-clockwise angle of rotation with speed varying oscillations, the speed varying oscillations being maintained to effect less than a one gravity centrifugal force on the items such that the items will tumble in said wash chamber. Cooresmans fails to cure the deficiencies of Haberl. As claims 20 and 21 depend from and further distinguish an allowable base claim 12, they too should be deemed allowable.

Double Patenting Rejection

Claims 12, 14, 15, 17, 20 and 21 have been rejected for obviousness-type double-patenting over claims 1-21 of U.S. Patent No. 7,127,767. This rejection is respectfully traversed.

The claims of the '767 patent are drawn to a method of washing items in an automatic washer having a wash chamber with a vertical central axis and a rotor rotatable about the vertical central axis. Each of claims 1-21 include a limitation for oscillating a rotor about the vertical central axis by time-varying oscillations.

In contrast, each remaining claim in the instant application includes a limitation for oscillating a wash chamber with speed-varying oscillations. Originally, the application included claims 1-11 drawn to oscillating the wash chamber by time-varying oscillations. The Examiner issued a restriction requirement with indication that oscillating the wash chamber by time-varying oscillations (claims 1-11) and oscillating the wash chamber by speed-varying oscillations (claims 12-24) are patentably distinct. Applicants elected to prosecute the claims directed to oscillating by speed-varying oscillations, without traverse, and have subsequently cancelled claims 1-11.

Applicants agree with the Examiner's determination that oscillating by time-varying oscillations and oscillating by speed-varying oscillations are patentably distinct, such that the current obviousness-type double-patenting rejection over claims 1-21 of U.S. Patent No. 7,127,767 cannot stand. Applicants respectfully request that the Examiner withdraw the obviousness-type double-patenting rejection.

Conclusion

All of the stated grounds of rejection have been properly traversed or rendered moot. It is believed that a full and complete response has been made to all of the outstanding rejections, and Applicant therefore respectfully requests that this amendment be entered.

The Applicants herewith petition the Director of the United States Patent and Trademark Office to extend the time for reply to the Office action dated July 13, 2007 for one month from October 13, 2007 to November 13, 2007. Please charge deposit account number 23-1660, in the amount of \$120 to cover the cost of the extension. No additional fees or extensions of time are

believed to be due in connection with this filing. However, please consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 23-1660.

It is respectfully submitted that the claims are allowable over the prior art of record.
Early notification of allowability is respectfully requested.

Respectfully submitted,

Dated: November 12, 2007

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